R E P O R T R E S U M E S

ED 011 947 24 AA 000 065

THE ONE ROOM SATELLITE.

BY- DREYFUS, LEE S.
WISCONSIN UNIV., MADISON

REPORT NUMBER BR-5-0216-6 PUB DATE JAN 66
CONTRACT OEC-5-10-154
EDRS PRICE MF-$0.09 HC-$0.52 13P.

DESCRIPTORS- *TELEVISION, *FRENCH, ENGLISH, *CLASSROOM COMMUNICATION, STUDENT PARTICIPATION, STUDENT REACTION, *CULTURAL EXCHANGE, HIGH SCHOOL STUDENTS, INSTRUCTIONAL INNOVATION, RESEARCH AND DEVELOPMENT CENTERS, *INSTRUCTIONAL TECHNOLOGY, MADISON, EARLY BIRD SATELLITE, PARIS, WEST BEND

A WISCONSIN HIGH SCHOOL FRENCH CLASS AND A GROUP OF STUDENTS IN AN ENGLISH CALSS AT THE LYCEE HENRI IV OF PARIS, FRANCE, PARTICIPATED IN A COMBINED CLASS SESSION IN THE FIRST INTERNATIONAL TV CLASSROOM EXCHANGE. THE TV SIGNALS WERE EXCHANGED BY MEANS OF THE EARLY BIRD SATELLITE AND PERMITTED THE STUDENTS TO EXCHANGE MESSAGES. DURING THE TELECAST THE AMERICAN STUDENTS SPOKE FRENCH AND THE FRENCH STUDENTS SPOKE ENGLISH. THE HISTORY OF THE ARRANGEMENTS FOR THE BROADCAST, THE TECHNICAL PROBLEMS INVOLVED, AND THE SPECIAL PROVISIONS FOR TRANSMISSION AND RECEPTION OF THE SIMULTANEOUS CLASS MEETINGS, THE SPECIAL PREPARATIONS OF THE AMERICAN STUDENTS, THE PROBLEMS ENCOUNTERED DURING THE BROADCAST, AND THE REACTIONS OF THE AMERICAN STUDENTS TO PARTICIPATION IN THE TELECAST ARE DESCRIBED IN THE REPORT. THE AUTHOR STATES THIS KIND OF EVENT SHOULD BE MADE A COMMON EXPERIENCE IN THE CLASSROOM. THIS ARTICLE HAS BEEN ACCEPTED FOR PUBLICATION IN THE "NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS JOURNAL," 1966. (AL)

BR. 5-0216-6
R.A. 24

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(An Article Accepted for Publication in the National Association of Educational Broadcasters Journal in 1966)

By

Lee S. Dreyfus, Principal Investigator
Instructional Television Project
Research and Development Center
for Learning and Re-Education;
Professor of Speech and Radio-
Television Education,
University of Wisconsin,

And

Gary Gumpert, Principal Investigator
Instructional Television Project
Research and Development Center
for Learning and Re-Education;
Assistant Professor of Radio-
Television Education,
University of Wisconsin.

Research and Development Center
for Learning and Re-Education
University of Wisconsin
Madison, Wisconsin

January, 1966

The dissemination activity reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education, and Welfare, under provision of the Cooperative Research Program.

Center No. C-03/Contract OE 5-10-154

ED011947

THE ONE ROOM SATELLITE

On May 31, 1965, the first intercontinental TV classroom exchange took place between the United States and France. A French class at the West Bend Wisconsin High School assembled with their teacher at the unusual hour of 7:00 A.M. on the Memorial Day holiday. It is probably true that only an "international incident" would entice students into school during a vacation.

On this particular morning, this class was to be combined for one hour with its counterpart at the Lycee Henri IV of Paris, France. The interconnection was accomplished by means of the Early Bird Satellite. The video and audio pick-up in the West Bend classroom was handled by the television unit of the University of Wisconsin. The signals from cameras and microphones were sent across the country by microwave to Andover, Maine (the North American ground station of the Communications Satellite Corporation.)

At Andover the picture and sound signals were transmitted 22,300 miles out into space to the Early Bird Communications Satellite which is a synchronous (stationary) orbiting instrument located above the Equator between Africa and South America. The signals were received by Early Bird and re-transmitted 22,300 miles back to earth to be received at a European ground station located at Plemeur-Bodou, France. It was here that the American television picture consisting of 525 scan lines was translated to a French television picture consisting of 819 scan lines. The picture was then transmitted into the classroom of the Lycee Henri IV.

The French Broadcasting System had their cameras and microphones located in that classroom. The sound and pictures originating there followed in reverse the same 47,000 miles route just described. One must remind himself that this is almost twice the distance around the earth. When the hour long class began it was 7:30 A.M. in West Bend and 1:30 P.M. in Paris. The American students spoke in French, and the French students spoke in English.

How does such a day arrive? One might say that the project began July 10, 1962 when Telstar was put into orbit. The specific program was first conceived as being practical and possible by U. W. Professor Lee S. Dreyfus in the summer of 1963, and the first correspondence related to the historic classroom exchange is dated in September of that year.[1] Radiodiffusion - Television Française, the French Broadcasting System, immediately grasped the significance of the project and agreed to finance and provide the facilities in Europe. A. T. & T. provided the use of the satellite, and the school system to be selected was to provide the funds for the necesaary land line connections. Due to a combination of circumstances including problems with Telstar and the inability to get the needed local support, the classroom interchange was delayed indefinitely.

In early April of this year, Superintendent Paul Koofboro of West Bend and Professor Dreyfus met at the University of Wisconsin Research and Development Center for Learning and Re-education to discuss the development of television as a tool in classroom instruction. The Telstar project (now Early Bird) was mentioned and caught the Superintendent's imagination. Moving quickly, he located local supporters to provide a major share of the needed funds. From this point on, some 100 people were set in motion for the next six weeks; and at 7:30 A.M. on the last day of May, their efforts became an historic fact.

The mechanics and electronics involved in such a project are impressive, but calculable. At this point in the development of international space communication, however, our human development has not kept pace with its electronic counterpart. The elements of frustration and ambivalence which occurred were the result of language, thought, and action occurring simultaneously on two separated continents.

On May 13, 1965 we were informed that any experimental utilization of Early Bird would have to be implemented before the end of the month. The decision was

made to activate the project, and Professor Gary Gumpert was assigned as the producer for the United States portion of the telecast.

Where does one start to develop and plan an international telecast faced with a seventeen day deadline? The only information available was the time, the place, some names in West Bend, and some ideas which had to be translated and articulated into a meaningful educational experience. Fortunately, we were in agreement on the basic principle that this telecast was not to be a "show," but rather an educational adventure for all students involved. We hoped that Paris would agree and thought that some French producer was at the very moment, meditating over similar plans and problems. Up to this point there had been no contact with our operational counterparts in Paris.

The immediate task was to go to West Bend in order to meet administrators, students and school. It was extrememly important to find an appropriate classroom large enough to contain students, paraphernalia, and technicians. Madame Helene Cassidy, our French language consultant, took the opportunity to watch one of the French classes while the producer sought a room which would be large enough, light enough, and accessible to the myriad but limited length cables of the mobile unit. We decided to use individual headsets to prevent feedback of the audio signal coming from France. If headsets had not been provided, our students would have heard their own voices delayed by four tenths of a second, due to the distance of the satellite from earth. This delayed audio is known to cause temporary stuttering. An outside view, in this case the West Bend athletic field, was used to establish some sense of a physical environment, one quite different from that of Paris.

Madame Cassidy's evaluation of the students she saw was that they were good high school students. However, we were informed that the students of the Lycee Henri IV would be far more accomplished in their grasp of English

since they were basically second year college students. We appeared to be outmatched! We wanted the entire project to have a sense of spontaneity, and yet we wanted to prepare the students for what lay ahead of them. Therefore, fifteen of the students were selected to travel to the University of Wisconsin television studio for an orientation session. Before leaving West Bend, some possible discussion subjects were suggested to the members of the class and they were asked to strengthen their French vocabulary in these areas.

A period of time was spent orienting the students to the camera. This was important since the students were going to see the French students on television receivers, but would have to talk directly to a camera in front of them. The second part of the afternoon was spent in role playing. The production staff, representing the French students asked questions in English.

Since there still had not been any contact with the producer-directors in Paris, it was decided to formulate a semi-structure for the telecast, a structure which would not destroy the immediacy and spontaneity of face to face contact between students. This structure was developed with Mr. Ted Nielsen, the director for the United States portion. The basic format was as follows:

I U.S.A. - introduction and greeting - 3 minutes

II France - response - 4 minutes

III U.S.A. - photo essay describing West Bend - 4 minutes

IV France - description of Lycee - 4 minutes

V Open discussion to close - 45 minutes

At this point facility requests, art orders, and as many of the arrangements that could be made were completed in Madison. A crew was assigned. They consisted of an engineering staff of two audio men, one video engineer,

and one videotape operator; a production staff which consisted of one producer, one director, three cameramen, two assistant directors, two floor managers, one photographer, and one staging-lighting man.

Mr. Jacques Sallebert, Permanent Representative of the French Broadcasting System in New York, was called to ascertain the identity of the French producer-director. Because of some technical problems in Paris, Mr. Sallebert had not yet received this information. It was then necessary to call Mr. Henri Dieuseide, Director of the Department of Radio Television Education in Paris. The process of placing a transatlantic telephone call is apparently an art. The art of surmounting the language barrier through an interpretor (in this case the producer informed Mr. Dieuseide through Madame Cassidy of the proposed ideas) is an adventure in frustration. At that time the name of the French producer-director was requested once again. This information was not yet available. The call was made on the 25th of May, six days before the telecast.

Because of a number of reasons it was decided that the live telecast would be limited to the classroom and several areas in the school where spectators could watch the event. The telecast would, however, be video tape recorded and telecast to the public that night.[2] In order to accomplish the recording it was necessary to improvise a new switching system. There would be a director in the mobile unit controlling the various cameras of the American transmission of the program, just as there would be a director in France to control his cameras and shots. The producer, also in the mobile unit, had an additional switching unit whereby he was able to select either the American or French video signal for recording.

Only three days before the telecast, the French producer-director was named. The French objected to the lack of back-up circuits to cover any

audio failure of the satellite and the lack of a fully structured one hour program. They did not understand that for us the demonstration had no significance unless it was by satellite. They also did not understand that this was intentionally unstructured in order to permit a true communication exchange.

A new and different problem arose. Several requests were made by newsmen and reporters to be allowed in the classroom during the telecast. It was decided that newsmen in the classroom would distract the students and vitiate the experiment. However, arrangements were made to allow reporters to interview students and take photographs after the telecast.

With a multitude of problems and a mixture of optimism and pessimism, the University of Wisconsin television unit left for West Bend on the morning of May 30, 1965. Every minute of that day was spent in the task of carrying equipment up to the room, connecting cameras, testing equipment, and adding additional lights. That night a rehearsal occurred for students, crew, and equipment.

Crew call was 5:00 A.M. the next morning. The equipment was turned on and the students arrived at 6:30 A.M. Anything that could be rehearsed was rehearsed; equipment was rechecked. Each new technical problem was solved as it arose.

At 7:30 A.M. we received a picture from Paris, France. All problems were not yet solved, however. Apparently the French were not getting our audio signal into the classroom at the French school. Precious minutes passed! The audio problems were not resolved until 7:53 A.M. Thus, for lack of a separate coordinating line twenty-three minutes of satellite time were lost. We would not recommend to future producers that they try to operate internationally without a separate coordinating line.

After the photographic essay on West Bend, there was unexplained laughter on both sides, the ice was broken, and student began talking to student unaware of the physical distance between them. Here was the communication we sought, for example, a French Beatle fan, who said he plays the electric guitar, noted that "We don't like them (Beatles) in the same way as you do." He did an imitation of an American girl affected by "Beatlemania." He asked why American girls scream and shout when they hear the Beatles. A West Bend girl answered, "When a girl screams she doesn't know why." She had forgotten to answer in French. She had also forgotten about technicians and cameras. She only wanted to communicate to a new friend in Paris. However, for the most part, the Americans used their newly learned French. The conversation ranged from leisure time activities, to automobile driving, to books, authors, plays, and modern philosophy. Suddenly the time ran out! The two teachers waved goodbye to each other and their images vanished from the screen.

The first reaction of our students was to express their feelings about having participated in the telecast itself. To be a part of any experiment and, in particular, to be the first to do something that would have significance on an international scale was of real consequence to them. The reaction that was most important as far as the experiment was concerned was their feelings of achievement. To have actually spoken the language they had been studying for three or four years and have been understood by native speakers of this language was to them most impressive. Of course they had spoken Frendh in the classroom since the beginning of their studies; but until one encounters native speakers of language and employs it successfully with them, one is never quite convinced that classroom conversation had any application to real life.

Another educationally important reaction was the impact of the dramatic kind of reinforcement the telecast gave to many items concerning French life and culture. Examples of this were: the more formal clothing worn by the students, the heavier academic program of a lycee, and the relatively few school-organized activities. Along with this, there was a reassessment of their own school, with perhaps a greater appreciation of its advantages and a new outlook towards its difference in goals. More striking in this instance was each student's delight in the shared interest of young people of approximately their own age. After being made conscious of differences, they soon realized that they shared tastes in modern music (including the Beatles), in cars and driving, and in reading materials.

This brings us to the point of the implications of such a program for the future. One can readily see its value toward increasing international understanding. In this it would resemble the American Field Service and other student exchange programs now in existance, with the added advantage of directly and personally involving more persons than any of the present programs with a similar goal could practically hope to do.

In the field of foreign language study, the motivational aspects of such a telecast are infinite. How much easier to teach a language skill to someone who knows that he will have an opportunity to use this skill in an exchange with native speakers, conceivably at the end of one or two years of study.

Although language study has a special interest in this type of exchange, it is not too difficult to visualize the use of this method in other subject fields. The field of social studies, for example, suggests many possibilities for advantageous use of this technique: i.e., asking students in another country about their way of life, with the possibility of interrupting for

clarification of a point or challenging a statement; or trying to explain the attitude of two governments towards each other.

The Principal of West Bend High School, Mr. A. G. Weiner, expressed the future of this approach when he said, "Communication by satellite in the future opens vistas for education in understanding the problems, traditions and customs of our neighbors. I can envision schools equipped with the technical equipment that will enable a given teacher, in a matter of minutes, to contact a counterpart in almost any area of the world. With this kind of communication, I am confident, we can make great strides toward solving the problems of human relations."

Our task now is to make this kind of event a common experience in the classroom. Our government has the means to do this and should consider putting at least a "one-room" satellite into stationary orbit almost immediately. Later on we can add all the rooms necessary. We who grew up in the telephone age know that educators never used this valuable communications tool in our classrooms. Now it is our obligation and responsibility to see that television and communication satellites do not suffer the same fate.

The noted Canadian media theorist, Marshall McLuhan has predicted that there will be international electric involvement of man to man which will result in a global village. On May 31, 1965, we were privileged to witness a glimpse of the future.

Footnotes

[1]All records and correspondence related to this project are deposited with the Mass Communications History Center of the State Historical Society of Wisconsin in Madison, Wisconsin.

[2]The telecast was delayed for public broadcast in Madison only. It was broadcast live throughout the whole of France.